

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A system for storing data, comprising:
2 at least one computer; and
3 a disk array apparatus to be used by said at least one computer, said disk array
4 apparatus including:
5 a plurality of disks,
6 a first controller, and
7 a second controller, wherein said first controller has a first exclusive cache
8 and said second controller has a second exclusive cache, and wherein said first controller and
9 said second controller are operatively coupled to said plurality of disks;
10 wherein said first controller controls a plurality of first logical units in said
11 plurality of disks and manages first configuration information of said plurality of first logical
12 units,
13 wherein said second controller controls a plurality of second logical units in said
14 plurality of disks and manages second configuration information of said plurality of second
15 logical units, and
16 wherein said ~~first~~second controller takes over control of ~~one~~a subset of said
17 ~~plurality of first logical units from said first controller to said second controller by~~
18 ~~rewriting~~including obtaining a portion of said first configuration information associated with said
19 ~~one of said plurality subset~~ of first logical units,
20 wherein said first controller maintains control over those of said first logical units
21 that are not in said subset of first logical units.

2-14. (Canceled).

1 15. (Currently amended) A system according to claim 1, further comprising:
2 a management apparatus being coupled with said at least one computer and said
3 disk array apparatus, wherein said management apparatus designates ~~a said subset of first logical~~
4 ~~units number and said second controller to, wherein said management apparatus communicates~~
5 ~~such designations to said disk array apparatus, wherein said first logical unit number corresponds~~
6 ~~to said one of said plurality of first logical units, and~~
7 ~~wherein said first controller takes over control of said one of said plurality of first~~
8 ~~logical units designated by said management apparatus to said second controller designated by~~
9 ~~said management apparatus.~~

1 16. (Currently amended) A system according to claim 1, wherein ~~after prior~~
2 ~~to said second controller taking over said subset of first logical units, said first controller writes~~
3 ~~data of said one of said plurality subset of first logical units, that is stored in said first exclusive~~
4 ~~cache, onto said plurality of disks that constitute said subset of first logical units, said first~~
5 ~~controller takes over control of said one of said plurality of first logical units to said second~~
6 ~~controller.~~

1 17. (Currently amended) A system according to claim 16, further comprising:
2 a management apparatus being coupled with said at least one computer and said
3 disk array apparatus, wherein said first controller writes said data ~~of said one of said plurality of~~
4 ~~first logical units, stored in said first exclusive cache, onto said plurality of disks in response to a~~
5 ~~write instruction from said management apparatus.~~

1 18. (Currently amended) A system according to claim 17, further comprising:
2 a path controller being coupled with said at least one computer and said disk array
3 apparatus, wherein after said first controller writes said data ~~of said one of said plurality of first~~
4 ~~logical units, stored in said first exclusive cache, onto said plurality of disks, then said~~
5 management apparatus directs a path change to said path controller, and in response said path
6 controller changes a path for accessing said ~~one of said plurality~~subset of first logical units from

7 a first path that is between said path controller and said first controller, ~~in~~ to a second path that is
8 between said path controller and said second controller.

1 19. (Currently amended) A system according to claim 1, further comprising:
2 a backup apparatus being coupled with said at least one computer, wherein after
3 said ~~first~~ second controller takes over control of said ~~one of said plurality~~ subset of first logical
4 units ~~to said second controller~~, said at least one computer stores data of said ~~one of said~~
5 ~~plurality~~ subset of first logical units ~~in~~ onto said backup apparatus via said second controller, and
6 subsequent to storing data of said subset of first logical units onto said backup apparatus, said
7 first controller regains controller over said subset of first logical units.

1 20. (Currently amended) A system according to claim 19,
2 wherein said ~~one of said plurality~~ subset of first logical units stores copy data of
3 ~~another one of said plurality of others of said~~ first logical units,
4 wherein when said disk array apparatus receives a split instruction from said at
5 least one computer, said first controller stops storing said copy data of said another one of said
6 plurality of first logical units in said one of said plurality of first logical units, and
7 wherein after said first controller takes over control of said one of said plurality of
8 first logical units to said second controller, said at least one computer stores said data of said one
9 of said plurality of first logical units in said backup device via said second controller.

1 21. (Previously presented) A method of controlling a disk array apparatus
2 coupled with at least one computer, wherein said disk array apparatus comprises a plurality of
3 disks, a first controller and a second controller, and wherein said first controller has a first
4 exclusive cache and said second controller has a second exclusive cache, said method comprising
5 ~~the steps of:~~
6 controlling, with said first controller, a plurality of first logical units ~~in~~ defined
7 among said plurality of disks and managing first configuration information of relating to said
8 plurality of first logical units;

controlling, with said second controller, a plurality of second logical units in
defined among said plurality of disks and managing second configuration information of relating
to said plurality of second logical units; and
taking over control of ~~one first ones~~ of said plurality of first logical units, by said
~~first controller from said first controller to said second controller, by rewriting~~ including
obtaining some of said first configuration information associated with said ~~one first ones~~ of said
plurality of first logical units.

22. (Currently amended) The method of claim 21, further comprising:
designating said first ones of said first logical units and said second controller in [,
by] a management apparatus ~~being coupled with said at least one computer and communicating~~
such designations to said disk array apparatus, a first logical unit number and said second
~~controller to said disk array apparatus, wherein said first logical unit number corresponds to said~~
~~one of said plurality of first logical units; and~~
~~taking over control of said one of said plurality of first logical units designated by~~
~~said management apparatus to said second controller designated by said management apparatus.~~

23. (Currently amended) The method of claim 21, ~~wherein after further~~
comprising said first controller writing data of said first ones of said ~~plurality of first logical~~
~~units[,]~~ that is stored in said first exclusive cache[, onto] to said plurality of disks associated with
said first ones of said first logical units prior to said taking over, ~~said first controller takes over~~
~~control of said one of said plurality of first logical units to said second controller.~~

24. (Previously presented) The method of claim 23, further comprising:
generating, by a management apparatus being coupled with said at least one
computer and said disk array apparatus, a write instruction; and
writing, by said first controller, said data of said one of said plurality of first
logical units, stored in said first exclusive cache, onto said plurality of disks in response to said
write instruction.

1 25. (Previously presented) The method of claim 24, further comprising:
2 directing, by said management apparatus, a path change to a path controller being
3 coupled with said at least one computer and said disk array apparatus, after said first controller
4 writes said data of said one of said plurality of first logical units, stored in said first exclusive
5 cache, onto said plurality of disks; and
6 changing, by said path controller, a path for accessing said one of said plurality of
7 first logical units from a first path between said path controller and said first controller, into a
8 second path between said path controller and said second controller.

9
1 26. (Previously presented) The method of claim 21, further comprising:
2 storing, by said at least one computer via said second controller, data of said one
3 of said plurality of first logical units in a backup apparatus being coupled with said at least one
4 computer, after said first controller takes over control of said one of said plurality of first logical
5 units to said second controller.

1 27. (Previously presented) The method of claim 26,
2 wherein said one of said plurality of first logical units stores copy data of another
3 one of said plurality of first logical units,
4 wherein when said disk array apparatus receives a split instruction from said at
5 least one computer, said first controller stops storing said copy data of said another one of said
6 plurality of first logical units in said one of said plurality of first logical units, and
7 wherein after said first controller takes over control of said one of said plurality of
8 first logical units to said second controller, said at least one computer stores said data of said one
9 of said plurality of first logical units in said backup device via said second controller.

1 28. (Previously presented) A disk array apparatus to be used by at least one
2 computer, said disk array apparatus comprising:
3 a plurality of disks,
4 a first controller, and

5 a second controller, wherein said first controller has a first exclusive cache and
6 said second controller has a second exclusive cache, and wherein said first controller and said
7 second controller are coupled to said plurality of disks,

8 wherein said first controller controls a plurality of first logical units in said
9 plurality of disks and manages first configuration information of said plurality of first logical
10 units,

11 wherein said second controller controls a plurality of second logical units in said
12 plurality of disks and manages second configuration information of said plurality of second
13 logical units, and

14 wherein said first controller takes over control of one of said plurality of first
15 logical units from said first controller to said second controller by rewriting said first
16 configuration information associated with said one of said plurality of first logical units.

1 29. (Previously presented) A disk array apparatus according to claim 28,
2 wherein a management apparatus designates a first logical unit number and said
3 second controller to said disk array apparatus, wherein said first logical unit number corresponds
4 to said one of said plurality of first logical units, and

5 wherein said first controller takes over control of said one of said plurality of first
6 logical units designated by said management apparatus to said second controller designated by
7 said management apparatus.

1 30. (Previously presented) A disk array apparatus according to claim 28,
2 wherein after said first controller writes data of said one of said plurality of first logical units,
3 stored in said first exclusive cache, onto said plurality of disks, said first controller takes over
4 control of said one of said plurality of first logical units to said second controller.

1 31. (Previously presented) A disk array apparatus according to claim 30,
2 wherein said first controller writes said data of said one of said plurality of first logical units,

3 stored in said first exclusive cache, onto said plurality of disks in response to a write instruction
4 from a management apparatus.

1 32. (Previously presented) A disk array apparatus according to claim 31,
2 wherein after said first controller writes said data of said one of said plurality of first logical
3 units, stored in said first exclusive cache, onto said plurality of disks, said management apparatus
4 directs a path change to a path controller, and said path controller changes a path for accessing
5 said one of said plurality of first logical units from a first path between said path controller and
6 said first controller, into a second path between said path controller and said second controller.

1 33. (Previously presented) A disk array apparatus according to claim 28,
2 wherein after said first controller takes over control of said one of said plurality of first logical
3 units to said second controller, said at least one computer stores data of said one of said plurality
4 of first logical units in a backup apparatus via said second controller.

1 34. (Previously presented) A disk array apparatus according to claim 33,
2 wherein said one of said plurality of first logical units stores copy data of another
3 one of said plurality of first logical units,

4 wherein when said disk array apparatus receives a split instruction from said at
5 least one computer, said first controller stops storing said copy data of said another one of said
6 plurality of first logical units in said one of said plurality of first logical units, and

7 wherein after said first controller takes over control of said one of said plurality of
8 first logical units to said second controller, said at least one computer stores said data of said one
9 of said plurality of first logical units in said backup device via said second controller.